

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	"20020109160"	US-PGPUB; USPAT	OR	OFF	2004/12/10 10:54
S2	0	"348""."308".ccls.	USPAT	OR	OFF	2004/12/13 16:06
S3	386	348/308.ccls.	USPAT	OR	OFF	2004/12/13 16:06
S4	235	S3 and substrate	USPAT	OR	OFF	2004/12/13 16:06
S5	212	S4 and (photodiode or photo or diode)	USPAT	OR	OFF	2004/12/13 16:07
S6	28	S5 and gate and (transfer adj transistor)	USPAT	OR	OFF	2004/12/13 16:09
S7	20	S6 and mos and (solid-state or solid or state)	USPAT	OR	OFF	2004/12/13 16:09
S8	0	("6731337").URPN.	USPAT	OR	OFF	2004/12/13 16:17
S9	4	("20020109160" "6521925" "6566678" "6606124").PN. OR ("6731337").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/13 16:17
S10	2	("6566678").URPN.	USPAT	OR	OFF	2004/12/13 16:19
S11	2	("6566678").URPN.	USPAT	OR	OFF	2004/12/13 16:19
S12	4	("5243180" "6248133" "6356305").PN. OR ("6606124").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/13 16:20
S13	45063	mos and (solid-state or solid or state)	USPAT	OR	OFF	2004/12/13 16:28
S14	1826	S13 and photodiode	USPAT	OR	OFF	2004/12/13 16:28
S15	361	S14 and gate and (transfer same transistor)	USPAT	OR	OFF	2004/12/13 16:29
S16	346	S15 and (n-type or n or type) and (p-type or p or type)	USPAT	OR	OFF	2004/12/13 16:31
S17	12254	S16 and semiconductor region and charge and pixel	USPAT	OR	OFF	2004/12/13 16:32
S18	107	S16 and (semiconductor same region) and charge and pixel	USPAT	OR	OFF	2004/12/13 16:32
S19	35	S18 and pixel\$2 and positive and negative	USPAT	OR	OFF	2004/12/13 16:33
S20	24	photodiode and (transfer adj transistor) and (gate same voltage same negative)	USPAT	OR	OFF	2004/12/14 09:11
S21	0	photodiode and (transfer adj transistor) and (gate same voltage same negative same invert\$2)	USPAT	OR	OFF	2004/12/14 09:12
S22	6	photodiode and (transfer adj transistor) and (gate same voltage same negative) and invert\$2	USPAT	OR	OFF	2004/12/14 09:12
S23	0	257/230.ccls	USPAT	OR	OFF	2004/12/14 10:05

S24	143	257/230.ccls.	USPAT	OR	OFF	2004/12/14 10:10
S25	19	S24 and (gate same negative) same (volt or volts or voltage)	USPAT	OR	OFF	2004/12/14 10:06
S26	3	S24 and (gate same negative) same (volt or volts or voltage) and (invert or inverted)	USPAT	OR	OFF	2004/12/14 10:10
S27	255	257/231.ccls.	USPAT	OR	OFF	2004/12/14 10:17
S28	8	S27 and (gate same negative) same (volt or volts or voltage) and (invert or inverted)	USPAT	OR	OFF	2004/12/14 10:17
S29	364	257/233.ccls.	USPAT	OR	OFF	2004/12/14 10:20
S30	3	S29 and (gate same negative) same (volt or volts or voltage) and (invert or inverted)	USPAT	OR	OFF	2004/12/14 10:20
S31	389	257/291.ccls.	USPAT	OR	OFF	2004/12/14 11:04
S32	14	S31 and (gate same negative) same (volt or volts or voltage) and (invert or inverted)	USPAT	OR	OFF	2004/12/14 12:12
S33	7	S32 and impurity and concentration and area	USPAT	OR	OFF	2004/12/14 10:38
S34	20	S31 and charge and (overflow or discharge) and photodiode and (transfer same transistor)	USPAT	OR	OFF	2004/12/14 11:07
S35	7	S31 and charge same flow same photodiode same substrate	USPAT	OR	OFF	2004/12/14 11:04
S36	426	257/292.ccls.	USPAT	OR	OFF	2004/12/14 11:04
S37	8	S36 and charge same flow same photodiode same substrate	USPAT	OR	OFF	2004/12/14 11:04
S38	1	2002/0109160	USPAT	OR	OFF	2004/12/14 11:19
S39	1	photodiode and detection and (transfer with transistor) and (gate same negative same invert)	USPAT	OR	OFF	2004/12/14 12:14
S40	1	photodiode and detection and (transfer with transistor) and (gate same negative) same invert	USPAT	OR	OFF	2004/12/14 12:14
S41	5	photodiode and detection and (transfer with transistor) and (gate same negative) and invert	USPAT	OR	OFF	2004/12/14 13:16
S42	1084	photodiode same n-type and p-type and substrate	USPAT	OR	OFF	2004/12/14 13:16
S43	139	photodiode same n-type same p-type same impurity same substrate	USPAT	OR	OFF	2004/12/14 13:17
S44	21	photodiode same n-type same p-type same impurity same (less or lower) same substrate	USPAT	OR	OFF	2004/12/14 13:30

S45	647	(n-type same semiconductor same region) and charge same (accumulate or accumulation)	USPAT	OR	OFF	2004/12/14 13:31
S46	84	(n-type same semiconductor same region) and charge same (accumulate or accumulation) and photodiode and substrate and gate	USPAT	OR	OFF	2004/12/14 13:32
S47	28	(n-type same semiconductor same region) and charge same (accumulate or accumulation) and photodiode and substrate and gate and negative and positive	USPAT	OR	OFF	2004/12/14 13:32
S48	9	(n-type same semiconductor same region) and charge same (accumulate or accumulation) and photodiode and substrate and gate and negative and positive and (invert or inverted)	USPAT	OR	OFF	2004/12/14 13:43
S49	647	(n-type same semiconductor same region) and charge same (accumulate or accumulation)	USPAT	OR	OFF	2004/12/14 13:44
S50	203	(n-type same semiconductor same region) and charge same (accumulate or accumulation) and (impurity same concentration)	USPAT	OR	OFF	2004/12/14 13:45
S51	54	S50 and gate same (negative and positive)	USPAT	OR	OFF	2004/12/14 13:45
S52	0	S51 and photodiode and transmitter	USPAT	OR	OFF	2004/12/14 13:46
S53	12	S51 and photodiode	USPAT	OR	OFF	2004/12/14 13:46
S54	4	("20020109160" "6521925" "6566678" "6606124").PN. OR ("6731337").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/14 13:48
S55	2	("6566678").URPN.	USPAT	OR	OFF	2004/12/14 13:50
S56	9	("4984047" "5625210" "5903021" "6084259" "6150676" "6169318" "6184055" "6218691").PN. OR ("6521925").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/14 13:50
S57	1081	n-type same (impurity with concentration) same (less or lower) same p-type	USPAT	OR	OFF	2004/12/14 14:28
S58	815	n-type same (impurity adj concentration) same (less or lower) same p-type	USPAT	OR	OFF	2004/12/14 14:28
S59	554	n-type same region same (impurity adj concentration) same (less or lower) same p-type	USPAT	OR	OFF	2004/12/14 14:29

S60	0	n-type same region same (impurity adj concentration) same (less adj than) same p-type	USPAT	OR	OFF	2004/12/14 14:29
S61	0	n-type same region same (impurity adj concentration) same (less with than) same p-type	USPAT	OR	OFF	2004/12/14 14:29
S62	554	n-type same region same (impurity adj concentration) same (less or lower) same p-type same region	USPAT	OR	OFF	2004/12/14 14:30
S63	76	S62 and gate same (positive and negative) same voltage	USPAT	OR	OFF	2004/12/14 14:31
S64	7	("4665418" "5264384" "5591652" "5650340" "5780912" "5998265" "6121655").PN. OR ("6803623").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/14 15:05
S65	57	("4342149" "4442589" "4578128" "4771012" "4939571" "4949140" "5210044" "5264384" "5364807" "5366915" "5371394" "5376566" "5378909" "5424567" "5427964").PN. OR ("5650340").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/14 15:07
S66	32	("4769686" "4914492" "5045916" "5061975" "5147811" "5189497" "5190887" "5194749" "5208175" "5216272" "5217910" "5247198" "5334870" "5424567" "5444282" "5477072" "5486487" "5492847" "5532176" "5578509" "5585293" "5612914" "5629541" "5650340" "5656522" "5656839" "5691560" "5753556" "5780902").PN. OR ("6236085").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/14 15:14

S67	39	(US-4686554-\$ or US-4791469-\$ or US-4916512-\$ or US-5128735-\$ or US-5260592-\$ or US-5563431-\$ or US-5442208-\$ or US-4798958-\$ or US-5581094-\$ or US-5598023-\$ or US-5920092-\$ or US-6180969-\$ or US-6281533-\$ or US-4626915-\$ or US-5304803-\$ or US-5880495-\$ or US-6815791-\$ or US-4733286-\$ or US-5847422-\$ or US-6731337-\$ or US-6380602-\$ or US-6606124-\$ or US-6566678-\$ or US-6521925-\$ or US-6218691-\$ or US-6184055-\$). did. or (US-6084259-\$ or US-5903021-\$ or US-4984047-\$ or US-6180959-\$ or US-6236085-\$ or US-5691560-\$ or US-5650340-\$ or US-6110783-\$ or US-6100148-\$ or US-6093951-\$ or US-5985727-\$ or US-5923987-\$ or US-5371394-\$). did.	USPAT	OR	OFF	2004/12/14 16:35
S68	17	S67 and n-type same (impurity concentration)	USPAT	OR	OFF	2004/12/14 16:36
S69	9	S67 and n-type same (impurity adj concentration)	USPAT	OR	OFF	2004/12/15 09:02
S70	97	p-type same n-type same (impurity adj concentration) and (black or dark) with current	USPAT	OR	OFF	2004/12/15 09:03
S71	0	("6486498").URPN.	USPAT	OR	OFF	2004/12/15 09:21
S72	4	("5625210" "5904493" "6027955" "6100551").PN. OR ("6486498").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:22
S73	4	("3969751" "5045906" "5619049" "5942774").PN. OR ("6465859").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:24
S74	0	n-type same region same lower same than same (impurityadj concentration) same p-type and photodiode and detection	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:26
S75	0	n-type same region same lower same than same (impurityadj concentration) same p-type and photodiode	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:26
S76	0	n-type same region same (lower or less) same than same (impurity adj concentration) same p-type and photodiode	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:27
S77	64	n-type same region same (lower or less) same (impurity adj concentration) same p-type and photodiode	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:27

S78	18	n-type same region same (lower or less) same (impurity adj concentration) same p-type and photodiode and detection	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:27
S79	18	n-type same region same (lower or less) same (impurity adj concentration) same p-type and photodiode and detection and substrate	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:32
S80	0	(photodiode and detection and transfer and transsistor and gate and voltage and positive and negative) and n-type same (lower or less) same (impurity adj concentration) same p-type	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:33
S81	252	gate and voltage and positive and negative and n-type same (lower or less) same (impurity adj concentration) same p-type	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:34
S82	155	gate same voltage same (positive and negative) and n-type same (lower or less) same (impurity adj concentration) same p-type	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 10:58
S83	0	photdiode and detection and gate same voltage same (positive and negative) and n-type same (lower or less) same (impurity adj concentration) same p-type	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:40
S84	0	photdiode and gate same voltage same (positive and negative) and n-type same (lower or less) same (impurity adj concentration) same p-type	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:35
S85	5	photodiode and gate same voltage same (positive and negative) and n-type same (lower or less) same (impurity adj concentration) same p-type	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:35
S86	1	("2002/0109160").URPN.	USPAT	OR	OFF	2004/12/15 09:36
S87	4	("20020109160" "6521925" "6566678" "6606124").PN. OR ("6731337").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:36
S88	5	(photodiode and transistor) and gate same voltage same (positive and negative) and n-type same (lower or less) same (impurity adj concentration) same p-type	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:47
S89	397	257/233.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:49

S90	17	S89 and photodiode same negative	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:50
S91	510	257/292.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:49
S92	35	S91 and photodiode same negative	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 09:50
S93	0	10/046402	USPAT	OR	OFF	2004/12/15 10:31
S94	1	2002/0109160	USPAT	OR	OFF	2004/12/15 10:32
S95	4	("20020109160" "6521925" "6566678" "6606124").PN. OR ("6731337").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 10:32
S96	43	(US-20020109160-\$).did. or (US-4686554-\$ or US-4791469-\$ or US-4916512-\$ or US-5128735-\$ or US-5260592-\$ or US-5563431-\$ or US-5442208-\$ or US-4798958-\$ or US-5581094-\$ or US-5598023-\$ or US-5920092-\$ or US-6180969-\$ or US-6281533-\$ or US-4626915-\$ or US-5304803-\$ or US-5880495-\$ or US-6815791-\$ or US-4733286-\$ or US-5847422-\$ or US-6731337-\$ or US-6380602-\$ or US-6606124-\$ or US-6566678-\$ or US-6521925-\$ or US-6218691-\$ or US-6184055-\$). did. or (US-6084259-\$ or US-5903021-\$ or US-4984047-\$ or US-6180959-\$ or US-6236085-\$ or US-5691560-\$ or US-5650340-\$ or US-6110783-\$ or US-6100148-\$ or US-6093951-\$ or US-5985727-\$ or US-5923987-\$ or US-5371394-\$ or US-6486498-\$ or US-6465859-\$ or US-6320211-\$).did.	US-PGPUB; USPAT	OR	OFF	2004/12/15 10:35

S97	43	(US-20020109160-\$).did. or (US-4686554-\$ or US-4791469-\$ or US-4916512-\$ or US-5128735-\$ or US-5260592-\$ or US-5563431-\$ or US-5442208-\$ or US-4798958-\$ or US-5581094-\$ or US-5598023-\$ or US-5920092-\$ or US-6180969-\$ or US-6281533-\$ or US-4626915-\$ or US-5304803-\$ or US-5880495-\$ or US-6815791-\$ or US-4733286-\$ or US-5847422-\$ or US-6731337-\$ or US-6380602-\$ or US-6606124-\$ or US-6566678-\$ or US-6521925-\$ or US-6218691-\$ or US-6184055-\$). did. or (US-6084259-\$ or US-5903021-\$ or US-4984047-\$ or US-6180959-\$ or US-6236085-\$ or US-5691560-\$ or US-5650340-\$ or US-6110783-\$ or US-6100148-\$ or US-6093951-\$ or US-5985727-\$ or US-5923987-\$ or US-5371394-\$ or US-6486498-\$ or US-6465859-\$ or US-6320211-\$).did.	US-PGPUB; USPAT	OR	OFF	2004/12/15 10:35
S98	43	(US-20020109160-\$).did. or (US-4686554-\$ or US-4791469-\$ or US-4916512-\$ or US-5128735-\$ or US-5260592-\$ or US-5563431-\$ or US-5442208-\$ or US-4798958-\$ or US-5581094-\$ or US-5598023-\$ or US-5920092-\$ or US-6180969-\$ or US-6281533-\$ or US-4626915-\$ or US-5304803-\$ or US-5880495-\$ or US-6815791-\$ or US-4733286-\$ or US-5847422-\$ or US-6731337-\$ or US-6380602-\$ or US-6606124-\$ or US-6566678-\$ or US-6521925-\$ or US-6218691-\$ or US-6184055-\$). did. or (US-6084259-\$ or US-5903021-\$ or US-4984047-\$ or US-6180959-\$ or US-6236085-\$ or US-5691560-\$ or US-5650340-\$ or US-6110783-\$ or US-6100148-\$ or US-6093951-\$ or US-5985727-\$ or US-5923987-\$ or US-5371394-\$ or US-6486498-\$ or US-6465859-\$ or US-6320211-\$).did.	US-PGPUB; USPAT	OR	OFF	2004/12/15 10:36
S99	12	S98 and (gate with voltage with negative)	US-PGPUB; USPAT	OR	OFF	2004/12/15 10:36
S10 0	1	S82 and photodiode and (transfer with transistor)	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 10:54
S10 1	5	S82 and photodiode and (transistor)	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 10:54

S10 2	52	mos and photodiode and (solid-state or solid adj state) and transistor with gate with voltage with negative	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:00
S10 3	0	S102 and charge&2 with (accumulate or accumulation)	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:00
S10 4	0	S102 and charge&2	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:01
S10 5	38	S102 and charges	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:01
S10 6	6	S102 and charge\$2 and accumulate	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:02
S10 7	6	S102 and charge and accumulate	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:13
S10 8	0	(photodiode and gate and transistor) and mos and (solid-state or solid adj state)	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:14
S10 9	1035	(photodiode and gate and transistor) and mos and (solid-state or solid adj state)	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:39
S11 0	99	S109 and (negative with voltage with gate)	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:15
S11 1	0	S109 and (negative with voltage with gate) same invert	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:15
S11 2	8	(photodiode and gate and transistor) and mos and (solid-state or solid adj state) and (inverse or invert) same channel	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 11:45
S11 3	50	(photodiode and gate and transistor) and mos and (solid-state or solid adj state) and (inverse or invert\$2) same (channel or under or portion) same gate	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 12:07
S11 4	0	("2001/0052940").URPN.	USPAT	OR	OFF	2004/12/15 11:47
S11 5	351	(photodiode and transistor) and (inverse or invert\$2) same (channel or under or portion) same gate	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 12:07
S11 6	61	(photodiode and transistor) and (inverse or invert) same (channel or under or portion) same gate	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 12:09

S11 7	35	(photodiode and transistor and substrate) and (inverse or invert) same (channel or under or portion) same gate	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/15 12:10
S11 8	389	257/291.ccls.	USPAT	OR	OFF	2004/12/21 09:51
S11 9	208	S118 and (photodiode or photo-diode)	USPAT	OR	OFF	2004/12/21 09:29
S12 0	14	S119 and (detection or detector or detect) same portion	USPAT	OR	OFF	2004/12/21 09:34
S12 1	87	S119 and (detection or detector or detect) and (gate same volt\$3)	USPAT	OR	OFF	2004/12/21 09:35
S12 2	20	S119 and (detection or detector or detect) and (gate same volt\$3) and (impurity same concentration)	USPAT	OR	OFF	2004/12/21 09:37
S12 3	449	S119 mos and (solid-state or solid adj state) and (detection or detector or detect) and (gate same volt\$3) and (impurity same concentration)	USPAT	OR	OFF	2004/12/21 09:38
S12 4	311	S119 mos and (solid-state or solid adj state) and (detection or detector or detect) and (gate same volt\$3) and (transistor same transfer) and (impurity same concentration)	USPAT	OR	OFF	2004/12/21 09:38
S12 5	487	S118 mos and (solid-state or solid adj state) and (detection or detector or detect) and (gate same volt\$3) and (transistor same transfer) and (impurity same concentration)	USPAT	OR	OFF	2004/12/21 09:39
S12 6	10	S118 and mos and (solid-state or solid adj state) and (detection or detector or detect) and (gate same volt\$3) and (transistor same transfer) and (impurity same concentration)	USPAT	OR	OFF	2004/12/21 09:41
S12 7	0	S118 and mmos and (solid-state or solid adj state) and (detection or detector or detect) and (gate same volt\$3) and (transistor same transfer) and (impurity same concentration)	USPAT	OR	OFF	2004/12/21 09:44
S12 8	0	S118 and mmos and (solid-state or solid adj state)	USPAT	OR	OFF	2004/12/21 09:42
S12 9	0	S118 and mmos and (solid-state)	USPAT	OR	OFF	2004/12/21 09:43
S13 0	120	S118 and mos and (solid-state or solid adj state)	USPAT	OR	OFF	2004/12/21 09:52

S13 1	32	S130 and gate same voltage same negative	USPAT	OR	OFF	2004/12/21 09:53
S13 2	21	S130 and gate with voltage with negative	USPAT	OR	OFF	2004/12/21 09:54
S13 3	7	S132 and photodiode and transistor	USPAT	OR	OFF	2004/12/21 09:55
S13 4	47	(US-20020109160-\$).did. or (US-4626915-\$ or US-4686554-\$ or US-4733286-\$ or US-4791469-\$ or US-4798958-\$ or US-4916512-\$ or US-4984047-\$ or US-4995049-\$ or US-5128735-\$ or US-5260592-\$ or US-5304803-\$ or US-5371394-\$ or US-5442208-\$ or US-5563431-\$ or US-5581094-\$ or US-5598023-\$ or US-5650340-\$ or US-5691560-\$ or US-5714782-\$ or US-5847422-\$ or US-5880495-\$ or US-5892253-\$ or US-5903021-\$ or US-5920092-\$ or US-5923987-\$ or US-5942775-\$). did. or (US-5985727-\$ or US-6084259-\$ or US-6093951-\$ or US-6100148-\$ or US-6110783-\$ or US-6180959-\$ or US-6180969-\$ or US-6184055-\$ or US-6218691-\$ or US-6236085-\$ or US-6281533-\$ or US-6320211-\$ or US-6380602-\$ or US-6465859-\$ or US-6486498-\$ or US-6521925-\$ or US-6566678-\$ or US-6606124-\$ or US-6731337-\$ or US-6815791-\$).did.	US-PGPUB; USPAT	OR	OFF	2004/12/21 10:01
S13 5	14	S134 and (negative with voltage with gate)	US-PGPUB; USPAT	OR	OFF	2004/12/21 11:35
S13 6	3	S135 and photodiode and (transistor with transfer)	US-PGPUB; USPAT	OR	OFF	2004/12/21 10:02

S13 7	47	(US-20020109160-\$).did. or (US-4626915-\$ or US-4686554-\$ or US-4733286-\$ or US-4791469-\$ or US-4798958-\$ or US-4916512-\$ or US-4984047-\$ or US-4995049-\$ or US-5128735-\$ or US-5260592-\$ or US-5304803-\$ or US-5371394-\$ or US-5442208-\$ or US-5563431-\$ or US-5581094-\$ or US-5598023-\$ or US-5650340-\$ or US-5691560-\$ or US-5714782-\$ or US-5847422-\$ or US-5880495-\$ or US-5892253-\$ or US-5903021-\$ or US-5920092-\$ or US-5923987-\$ or US-5942775-\$). did. or (US-5985727-\$ or US-6084259-\$ or US-6093951-\$ or US-6100148-\$ or US-6110783-\$ or US-6180959-\$ or US-6180969-\$ or US-6184055-\$ or US-6218691-\$ or US-6236085-\$ or US-6281533-\$ or US-6320211-\$ or US-6380602-\$ or US-6465859-\$ or US-6486498-\$ or US-6521925-\$ or US-6566678-\$ or US-6606124-\$ or US-6731337-\$ or US-6815791-\$).did.	US-PGPUB; USPAT	OR	OFF	2004/12/21 14:54
S13 8	22	S137 and (negative with voltage)	US-PGPUB; USPAT	OR	OFF	2004/12/21 11:35
S13 9	47	(US-20020109160-\$).did. or (US-4626915-\$ or US-4686554-\$ or US-4733286-\$ or US-4791469-\$ or US-4798958-\$ or US-4916512-\$ or US-4984047-\$ or US-4995049-\$ or US-5128735-\$ or US-5260592-\$ or US-5304803-\$ or US-5371394-\$ or US-5442208-\$ or US-5563431-\$ or US-5581094-\$ or US-5598023-\$ or US-5650340-\$ or US-5691560-\$ or US-5714782-\$ or US-5847422-\$ or US-5880495-\$ or US-5892253-\$ or US-5903021-\$ or US-5920092-\$ or US-5923987-\$ or US-5942775-\$). did. or (US-5985727-\$ or US-6084259-\$ or US-6093951-\$ or US-6100148-\$ or US-6110783-\$ or US-6180959-\$ or US-6180969-\$ or US-6184055-\$ or US-6218691-\$ or US-6236085-\$ or US-6281533-\$ or US-6320211-\$ or US-6380602-\$ or US-6465859-\$ or US-6486498-\$ or US-6521925-\$ or US-6566678-\$ or US-6606124-\$ or US-6731337-\$ or US-6815791-\$).did.	US-PGPUB; USPAT	OR	OFF	2004/12/21 14:55
S14 0	13	S139 and n-type same p-type same concentration same (less or lower)	US-PGPUB; USPAT	OR	OFF	2004/12/21 15:28

S14 1	3528	n-type same p-type same concentration same (less or lower)	US-PGPUB; USPAT	OR	OFF	2004/12/21 15:29
S14 2	43	photodiode same substrate same pixel same (impurity or doping) same concentration	US-PGPUB; USPAT	OR	OFF	2004/12/21 15:30
S14 3	10	S142 and S141	US-PGPUB; USPAT	OR	OFF	2004/12/21 15:46
S14 4	1	"5714782".pn.	US-PGPUB; USPAT	OR	OFF	2004/12/21 15:46
S14 7	47	(US-20020109160-\$).did. or (US-4626915-\$ or US-4686554-\$ or US-4733286-\$ or US-4791469-\$ or US-4798958-\$ or US-4916512-\$ or US-4984047-\$ or US-4995049-\$ or US-5128735-\$ or US-5260592-\$ or US-5304803-\$ or US-5371394-\$ or US-5442208-\$ or US-5563431-\$ or US-5581094-\$ or US-5598023-\$ or US-5650340-\$ or US-5691560-\$ or US-5714782-\$ or US-5847422-\$ or US-5880495-\$ or US-5892253-\$ or US-5903021-\$ or US-5920092-\$ or US-5923987-\$ or US-5942775-\$). did. or (US-5985727-\$ or US-6084259-\$ or US-6093951-\$ or US-6100148-\$ or US-6110783-\$ or US-6180959-\$ or US-6180969-\$ or US-6184055-\$ or US-6218691-\$ or US-6236085-\$ or US-6281533-\$ or US-6320211-\$ or US-6380602-\$ or US-6465859-\$ or US-6486498-\$ or US-6521925-\$ or US-6566678-\$ or US-6606124-\$ or US-6731337-\$ or US-6815791-\$).did.	US-PGPUB; USPAT	OR	OFF	2004/12/22 09:56
S14 8	0	S147 and gate same positive same voltage same channel same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 11:04
S14 9	1	S147 and gate same positive same voltage same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 09:57
S15 0	2	S147 and gate same voltage same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 09:59
S15 1	117	gate same voltage same (channel with portion) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:18
S15 2	608	photodiode same (transfer with transistor)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:00
S15 3	0	S152 and S151	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:01
S15 4	1	S151 and photodiode	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:01

S15 5	115	S151 and (photodiode or semiconductor)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:01
S15 6	0	gate same positive same voltage same (channel with portion) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:02
S15 7	25	gate same positive same voltage same (channel with portion) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:16
S15 8	3	gate same positive same voltage same (channel adj portion) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:16
S15 9	16	gate same voltage same (positive same negative) same (channel with portion) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:19
S16 0	1	S147 and gate same voltage same channel same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:32
S16 1	2	S147 and gate same voltage same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:33
S16 2	2	S147 and gate same channel same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:33
S16 3	1	gate same (channel adj portion) same (below or under) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:35
S16 4	700	gate same voltage same (below or under) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:35
S16 5	0	gate same voltage same psotive same (below or under) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:35
S16 6	168	gate same voltage same positive same (below or under) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:35
S16 7	112	gate same (voltage with positive) same (below or under) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:36
S16 8	72	gate with (voltage with positive) same (below or under) same (invert or inverse)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:36
S16 9	0	S168 and (channel adj portion)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:36
S17 0	35	S168 and (channel with portion)	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:53
S17 1	1	"20020109160"	US-PGPUB; USPAT	OR	OFF	2004/12/22 10:54
S17 2	23	S147 and gate with voltage with (source or supply)	US-PGPUB; USPAT	OR	OFF	2004/12/22 11:04
S17 3	2	photodiode same (transfer with transistor) same charge same flow same drain	USPAT	OR	OFF	2004/12/23 10:22

S17 4	38	("4062699" "4173818" "4208780" "5031008" "5429958" "5486480" "5565377" "5605855" "5650340" "5712501" "5744994" "5753958" "5773863").PN. OR ("6093951").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/23 10:29
S17 5	4	("3969751" "5045906" "5619049" "5942774").PN. OR ("6465859").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/29 14:51
S17 6	244	257/223.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/29 15:40
S17 7	222	S176 and (photodiode or photo-diode or semiconductor)	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/29 14:52
S17 8	99	S177 and charge and deplet\$5	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/29 15:40
S17 9	50	("3715485" "3728590" "3771149" "3792322" "3852799" "3863065" "3866067").PN. OR ("3896485").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/29 14:59
S18 0	24	("3845295" "3866067" "3896474" "3896485").PN. OR ("4373167").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/29 15:08
S18 1	253	257/229.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/29 15:40
S18 2	88	S181 and charge and deplet\$5	US-PGPUB; USPAT; USOCR	OR	OFF	2004/12/29 15:40

S18 3	50	(US-20020109160-\$).did. or (US-4626915-\$ or US-4686554-\$ or US-4733286-\$ or US-4791469-\$ or US-4798958-\$ or US-4916512-\$ or US-4984047-\$ or US-4995049-\$ or US-5128735-\$ or US-5260592-\$ or US-5304803-\$ or US-5371394-\$ or US-5563431-\$ or US-5581094-\$ or US-5598023-\$ or US-5650340-\$ or US-5691560-\$ or US-5714782-\$ or US-5847422-\$ or US-5880495-\$ or US-5892253-\$ or US-5903021-\$ or US-5920092-\$ or US-5923987-\$ or US-5942775-\$ or US-5985727-\$). did. or (US-6084259-\$ or US-6093951-\$ or US-6100148-\$ or US-6110783-\$ or US-6180959-\$ or US-6180969-\$ or US-6184055-\$ or US-6218691-\$ or US-6236085-\$ or US-6281533-\$ or US-6320211-\$ or US-6380602-\$ or US-6465859-\$ or US-6486498-\$ or US-6521925-\$ or US-6566678-\$ or US-6606124-\$ or US-6731337-\$ or US-6815791-\$ or US-3896485-\$ or US-4373167-\$ or US-3866067-\$ or US-5514887-\$). did.	US-PGPUB; USPAT	OR	OFF	2004/12/29 15:50
S18 4	31	S183 and (impurity with concentration)	US-PGPUB; USPAT	OR	OFF	2004/12/29 15:52
S18 5	33	S184 and (higher or lower) or (less with than) or (greater with than)	US-PGPUB; USPAT	OR	OFF	2004/12/29 15:53
S18 6	28	S185 and (n-type and p-type)	US-PGPUB; USPAT	OR	OFF	2004/12/29 15:53
S18 7	28	S185 and (n-type with p-type)	US-PGPUB; USPAT	OR	OFF	2004/12/29 15:53
S18 8	9	S185 and charge with (flow or overflow)	US-PGPUB; USPAT	OR	OFF	2004/12/29 15:59
S18 9	79	photodiode same (transfer with transistor) and charge with (flow or overflow)	US-PGPUB; USPAT	OR	OFF	2004/12/29 15:59
S19 0	378	257/435.ccls.	USPAT	OR	OFF	2004/12/29 16:28
S19 1	37	S190 and charge same flow\$3	USPAT	OR	OFF	2004/12/29 16:28
S19 2	655	257/431.ccls.	USPAT	OR	OFF	2004/12/29 16:28
S19 3	60	S192 and charge same flow\$3	USPAT	OR	OFF	2004/12/29 16:28
S19 4	0	audio adj recording adj communications	USPAT	OR	OFF	2005/01/05 15:12